REMARKS/ARGUMENTS

Reconsideration of the application is respectfully requested based on the following amendments and remarks.

In the Action, dated March 18, 2005, all pending claims were rejected by the Examiner. Claims 18 and 19 are cancelled herein and Claims 1, 13, and 17 have been amended to further clarify the subject matter regarded as the invention. Claims 5, 9-10, and 16 were previously canceled. Claims 20-26 are added. **Claims 1-4, 6-8, 11-15, 17, and 20-26 are now pending in this application.**

Rejections Under 35 U.S.C. § 103

Claims 1-4, 6-8, 11-15, and 17-19 stand rejected as being unpatentable over *Lee et al.* (USPN 6,130,967) (hereinafter *Lee*) in view of *Alumot et al.* (USPN 5,699,447) (hereinafter *Alumot* under 35 U.S.C. § 103.

Claims 18 and 19 are cancelled making further discussion of these rejections unnecessary.

Claim 1 is amended. Claim 1 recites "detectors ... configured to collect data in a different manner from other detectors of the plurality of detectors". For example, one such detector could be a SEM with another being an optical device. Alternatively, one detector could be filtered in one manner and another detector could use a different filter. Alternatively, another manner can involve different analysis algorithms. Many such variations and approaches are taught in the Specification (e.g., at page 8 (lines 15-25) or at page 12 and elsewhere). Moreover, Claim 1 teaches "aligning the data frames to facilitate pixel matching between the frames so that they correspond to the same regions of the wafer" and additionally teaches "processing the aligned data frames". The Applicants respectfully submit that the cited combination of references do not teach this combination of features. Accordingly, the cited art fails to support an obviousness rejection under §103. Therefore, applicants submit that the amendments to Claim 1 overcome the rejection. As such the applicants respectfully request that the pending rejection of Claim 1 be withdrawn

The applicants further submit that, for at least the reasons stated above with respect to Claim 1, dependent **Claims 2-4, 6-8, and 11-12** are also allowable. Accordingly, the applicants respectfully request that the pending rejection of these claims also be withdrawn.

Additionally, independent **Claim 13** is also amended. Claim 13 recites "a plurality of detectors each configured to obtain data using more than one manner of data collection ...". Such limitations are similarly described in the discussions of Claim 1 above. For at least those reasons it is believed that Claim 13 defines over the cited combination of references.

Also, in Claim 13 "the processing nodes are configured to align the data frames and conduct parallel processing of the data frames using at least one of: row based analysis, composite-row based analysis, column based analysis, and composite column based analysis to identify defects ". Thus, the Applicants respectfully submit that the cited combination of references do not teach this combination of features. Accordingly, the cited art fails to support an obviousness rejection under §103. Therefore, applicants submit that the amendments to Claim 13 overcome the rejection. As such the applicants respectfully request that the pending rejection of Claim 13 be withdrawn.

Amendments to **Claim 17** particularize the nature of performing "composite-column based analysis" to include "generating a second composite image for each device area by combining ... a selected data frame from each stream of data frames collected by each detector corresponding to a specific device area". This further limitation also helps distinguish the invention from the cited art.

The applicants further submit that, for at least the reasons stated above with respect to Claim 13, dependent **Claims 14, 15, and 17** are also allowable. Accordingly, the applicants respectfully request that the pending rejection of these claims also be withdrawn.

New Claims:

Claims 20-26 have been added to capture selected subject matter forming part of the invention.

Claims 20-25 depend from Claim 1 and should be allowable for at least the reasons expressed above in the discussions of Claim 1. However, several additional reasons are present in each of the added claims. For example, in **Claim 20** processing includes row-based analysis where for "each node processing a stream of ... data frames ... from a specified detector [are] ... collected by [a] specified detector to generate a first composite row-based image and wherein each data frame in the row corresponds to a respective device area". Thus, data streams from a single detector are compared on a frame by frame basis with a composite imaged to identify defects. This does not appear to be the case in the cited art.

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In another example, **Claim 23** recites a composite row based and composite column based combined analysis of the image data. This also does not appear to be the case in the cited art. **Claim 24** recites a limitation of "processing ... **aligned** data frames is conducted *in parallel* using a plurality of data processing nodes" (italics added) in order to accelerate processing and facilitate processing of large amounts of data concerning the same physical location (on the substrate being inspected) at the same time instead of sequentially or in pieces as is currently done in the industry. This is a big advantage and it is not taught in the cited art. Additionally, in **Claim 25** the data is collected "using different types of detectors" and "wherein processing the aligned data frames includes processing the data frames collected by the different types of detectors together." As explained above, this is distinct from the current approaches in the industry.

Finally, **Claim 26** teaches row based analysis and is dependent on Claim 13 and should be allowable for at least that reason.

In Conclusion:

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner wish to contact the undersigned for any reason, the telephone number set out below can be used.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. KLA1P095).

Respectfully submitted,

BEYER WEAVER & THOMAS, LLP

Francis T. Kalinski II
Registration No. 44,177

P.O. Box 778
Berkeley, CA 94704-0778
Telephone: (831) 642-9609
Alt. Tel.: (650) 961-8300

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